JVC
DVD PLAYER
XV-N320B
XV-N322S

INSTRUCTIONS

DVD VIDEO MPEG Multichannel dts DIGITAL OUT

DOLBY DIGITAL COMPACT DIGITAL AUDIO AV COMPU LINK

Region code of DVD VIDEO
This player can play back DVD VIDEO discs whose region code numbers include the player's Region Code, which is indicated on the region code symbol on the rear panel.
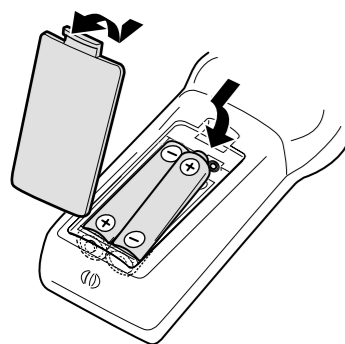Examples of playable DVD VIDEO discs:

The player's region code is printed on the rear of the player

Note of Color system format
This player is compatible with the PAL and NTSC systems. Select the correct color system for your TV (see "Initial settings").

Supplied accessories
If anything is missing, consult your dealer immediately.
• Audio/video cable (Yellow/White/Red) (x 1)
• Remote control (x 1)
• R6(SUM-3)/AA(15F) battery (x 2)
• AC power plug adaptor (x 1)
  (Only for Singapore)

CAUTION

To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

Caution — STANDBY/ON button!
Disconnect the mains plug to shut the power off completely. The STANDBY/ON button in any position does not disconnect the mains line. The power can be remote controlled.
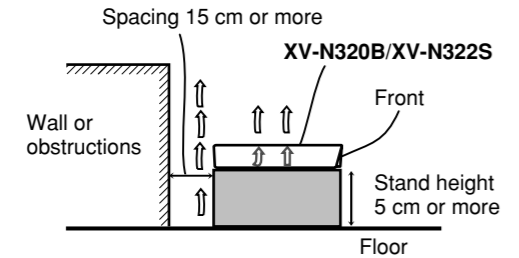
IMPORTANT FOR LASER PRODUCTS
1. CLASS 1 LASER PRODUCT
2. CAUTION: Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
3. CAUTION: Visible and invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
4. REPRODUCTION OF LABEL: CAUTION LABEL, PLACED INSIDE THE UNIT.

CAUTION:
• Do not block the ventilation openings or holes. (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
• Do not place any naked flame sources, such as lighted candles, on the apparatus.
• When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
• Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution: Proper Ventilation
To avoid risk of electric shock and fire and to protect from damage, locate the apparatus as follows:
Front: No obstructions and open spacing.
Sides: No obstructions in 3 cm from the sides.
Top: No obstructions in 5 cm from the top.
Back: No obstructions in 15 cm from the back.
Bottom: No obstructions, place on the level surface.

Spacing 15 cm or more

XV-N320B/XV-N322S

Wall or obstructions
Floor
Front
Stand height 5 cm or more

Precautions

Notes on the power cord
• When you are away on travel or otherwise for an extended period of time, remove the plug from the wall outlet. A small amount of power (1.0 W) is always consumed while the power cord is connected to the wall outlet.
• When unplugging the player from the wall outlet, always pull the plug, not the power cord.
• Do not handle the power cord with wet hands!
• Disconnect the power cord before cleaning the player or moving the player.
• Do not alter, twist or pull the power cord, or put anything heavy on it, which may cause fire, electric shock, or other accidents.
• If the cord is damaged, consult a dealer and have the power cord replaced with a new one.

Avoid moisture, water, dust, and high temperatures
• Do not place the player in moist or dusty places.
• If water gets inside the player, turn off the power and remove the plug from the wall outlet, then consult your dealer. Using the player in this state may cause a fire or electrical shock.
• Do not expose the player to direct sunlight or place it near a heating device.

Notes on installation
• Select a place which is level, dry and neither too hot nor too cold between 5˚C and 35˚C.
• Leave sufficient distance between the player and the TV.
• Do not install the player in a place subject to vibrations.
• Do not put heavy objects on the player.

To prevent malfunction of the player
• There are no user-serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
• Do not insert any metallic objects, such as wires, hairpins, coins, etc. into the player.
• Do not block the vents. Blocking the vents may damage the player.

To clean the cabinet
• Use a soft cloth. Follow the relevant instructions on the use of chemically-coated cloths.
• Do not use benzene, thinner or other organic solvents and disinfectants. These may cause deformation or discoloring.

Playable discs

• **DVD VIDEO, Audio CD, Video CD, SVCD**

DVD VIDEO CD Video CD SVCD

• DVD-R/-RW written in the DVD VIDEO format
• CD-R/RW written in the SVCD, Video CD or Audio CD format
• CD-R/RW written in MP3/JPEG in accordance with the "ISO 9660" format

Supported Digital audio formats:
Linear PCM, MPEG Multichannel, Dolby Digital, DTS (Digital Theater Systems)*

NOTES
• If a disc gets dirty, scratched or warped, or due to the disc characteristics or recording conditions, the player may not be able to play back such discs.
• The player can play back audio signals recorded in MIX-MODE CD, CD-G, CD-EXTRA and CD TEXT.
• With some discs, operations may not be possible.
* To play back DTS-encoded DVD VIDEO or DTS-encoded Audio CD discs correctly, connect the player to an amplifier with a built-in DTS decoder. Otherwise, playback sound will be distorted.

Unplayable discs
If you try to play back discs listed below, noise may be generated and causes damage to speakers.
• DVD-RW written in the VR format
• DVD-ROM, DVD-RAM, DVD AUDIO, CD-ROM, PHOTO CD, SACD
• Unfinalized discs
• Discs of irregular shape or discs with tape, seals or paste on either the label side or playback side. Playing back these discs may damage the player.
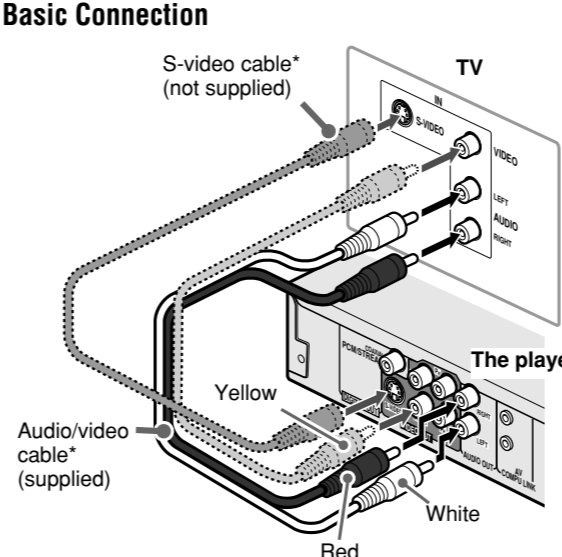
The Non-DVD side of a "DualDisc" does not comply with the "Compact Disc Digital Audio" standard.
Therefore, the use of Non-DVD side of a DualDisc on this product may not be recommended.
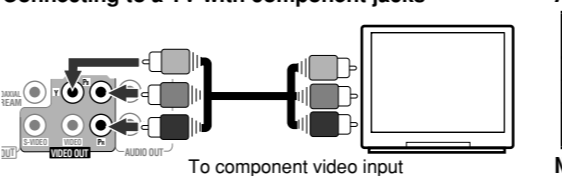
Connections

Before making connections:
• Do not connect the AC power cord until all other connections have been made.
• Connect VIDEO OUT of the player directly to the video input of your TV. Connecting VIDEO OUT of the player to a TV via a VCR/an integrated TV/Video system may cause a monitor problem.
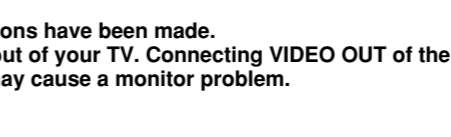
Basic Connection

S-video cable* (not supplied)
TV
Yellow
White
Red
Audio/video cable* (supplied)
The player

NOTES
• Set the correct color system according to the color system your TV supports. (See "COLOUR SYSTEM" in "Initial settings.")
• If your TV has a monaural audio input instead of stereo, use an optional audio cable which converts stereo audio output to monaural.
• If your TV is a HDTV or HD-ready TV, you can connect with component (Y, PB, PR) jacks. By connecting with component (Y, PB, PR) jacks, you can select the progressive scanning mode which provides the best picture quality.
* The S-VIDEO jack and the component (Y, PB, PR) jacks cannot be used at the same time.
When using the S-VIDEO jack, do not connect the component (Y, PB, PR) jacks with the player.

Connecting to a TV with component jacks

To component video input

To switch the scanning mode between Progressive and Interlace, press and hold VFP-I/P on the remote control for a few seconds.
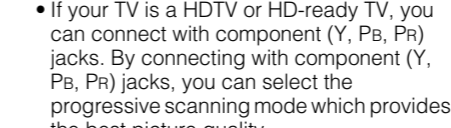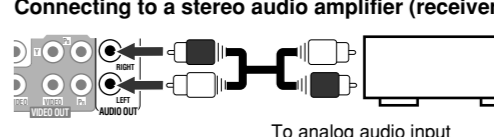
NOTES
• Connect "Y" to "Y," "PB" to "PB(CB)," "PR" to "PR(CR)" correctly.
• When using the component (Y, PB, PR) jacks, do not connect the S-VIDEO jack with the player.

About the scanning mode indicator

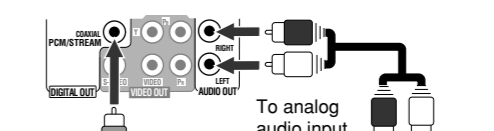| [PICTURE SOURCE] of the PICTURE menu	Source type of DVD VIDEO	
	Film source	Video source
AUTO	[DDP]	[P]
FILM	[DDP]	[DDP]
VIDEO(NORMAL)/(ACTIVE)	[P]	[P]

NOTE
Some progressive TV and High-Definition TV sets are not fully compatible with the player. To check the compatibility of your TV, contact your local JVC customer service center.

Connecting to a stereo audio amplifier (receiver)

To analog audio input

Connecting to a digital audio device

To enjoy high-quality surround sound, connect the DIGITAL OUT (COAXIAL) jack to a Dolby Digital or DTS decoder or an amplifier with a built-in decoder.
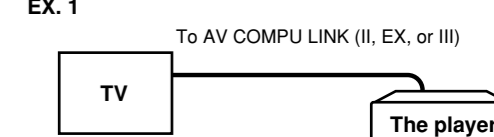
To analog audio input
To digital audio input

NOTES
• Depending on the disc, no signal may be outputted from the DIGITAL OUT. Make an analog connection in this case.
• Set [DIGITAL AUDIO OUTPUT] in the [AUDIO] preference display correctly according to the connected digital audio equipment. (See "DIGITAL AUDIO OUTPUT" in "Initial settings.")

Using the AV COMPU LINK system

The AV COMPU LINK system allows you to enjoy video and/or audio by simply pressing Play on the source component (the component which plays back the video or audio, such as a DVD player or VCR). You do not even have to switch on power on the TV or receiver.
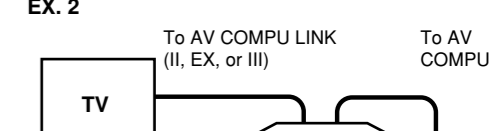
Connection and setup
Using an AV COMPU LINK cable, connect the AV COMPU LINK terminals of each component to one another.
• The player's AV COMPU LINK setting is controlled using the OTHERS menu in the preference display. See "AV COMPULINK MODE" in "Initial settings."
• See also the instruction manual of the other device.

Operation
1. Turn on the main power of the television.
2. Insert a disc (or tape) into the source component.
3. Press ▶ of the source component.
The following actions are performed automatically:
• Turning on the television and/or receiver.
• Setting the source of the television to the external input (VIDEO-1 or VIDEO-2).
• Setting the source of the receiver to the component which has started playback.

EX. 1
TV
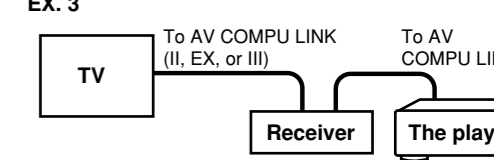To AV COMPU LINK (II, EX, or III)
The player

• Set the player's AV COMPU LINK setting as follows:
  – When connecting to the VIDEO-1 input terminal of the television: **DVD2**
  – When connecting to the VIDEO-2 input terminal of the television: **DVD3**

EX. 2
To AV COMPU LINK (II, EX, or III)   To AV COMPU LINK
TV
The player   VCR

• Set the VCR's Remote Control Code and the player's AV COMPU LINK setting as follows:
  – When connecting to the VIDEO-1 input terminal of the television:
    The player's AV COMPU LINK setting: DVD2
    VCR's Remote Control Code: **B**
  – When connecting to the VIDEO-2 input terminal of the television:
    The player's AV COMPU LINK setting: DVD3
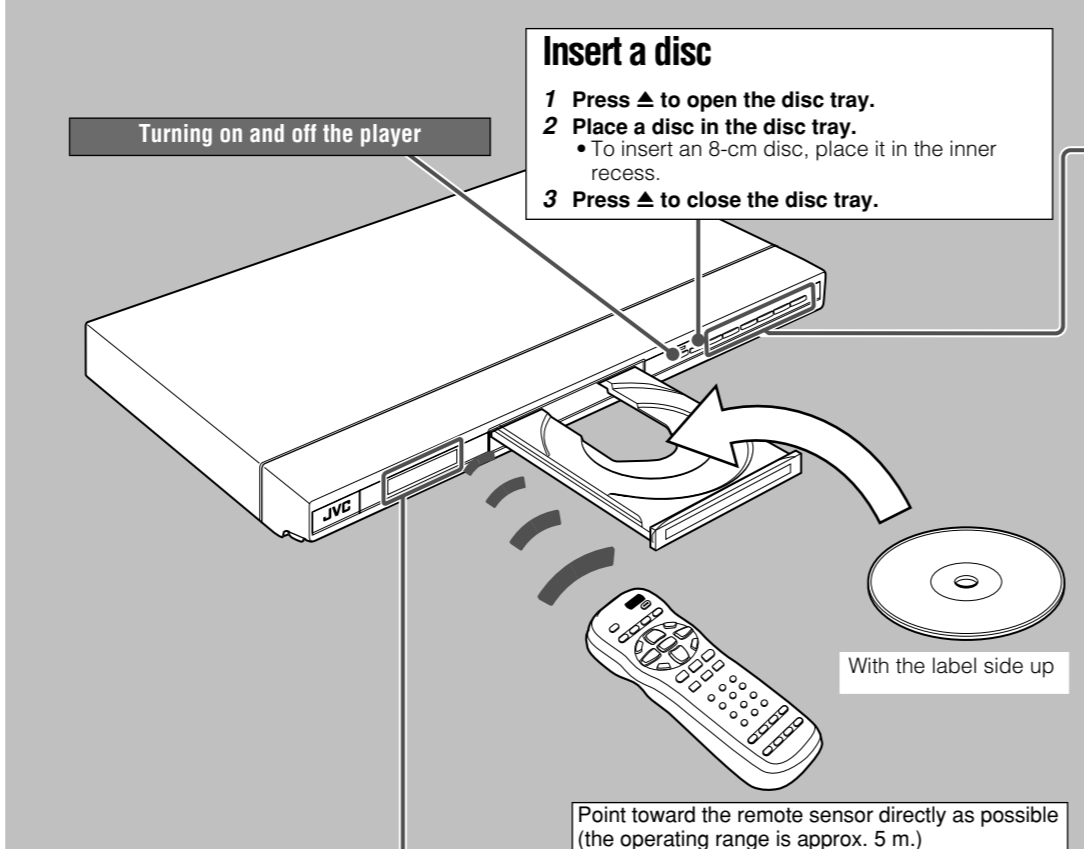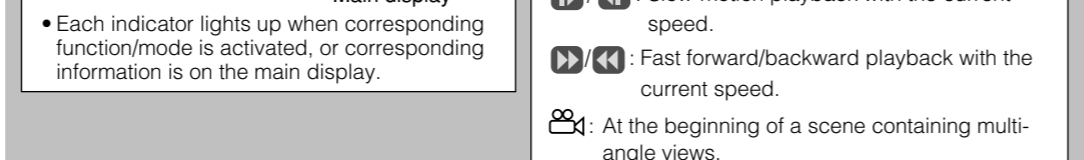   VCR's Remote Control Code: **A**

EX. 3
To AV COMPU LINK (II, EX, or III)   To AV COMPU LINK
TV
Receiver   The player

• Set the player's AV COMPU LINK setting to **DVD1**.

Notes for connection
• If you connect the player to a receiver via AV COMPU LINK in a system including a Dolby Digital decoder, some functions may not be performed automatically.
• Connect the AUDIO OUT jacks of the player to the audio input jacks of a receiver indicating "DVD." Otherwise, the system will not work correctly.

Turning on the power

Inserting the AC power plug
After all other connections have been made, insert the AC power plug to the wall outlet firmly.

Installing the batteries in the remote control
Open the compartment cover, and place the two supplied R6(SUM-3)/AA(15F) batteries in the remote control according to the polarity markings ("+" and "–") inside the compartment. Then replace the cover.

The batteries will last about six months with normal use. If the functions of the remote control become erratic, replace the batteries.

Precautions of the safe use of batteries
Observe the following precautions for the safe use of batteries. If they are used improperly their lives will be shortened, they may burst or their contents may leak.
• Remove the batteries from the remote control if it is not going to be used for a long period of time.
• Remove dead batteries and dispose of them properly.
• Never leave dead batteries lying around, take them apart, mix them with other refuse, or throw them into an incinerator.
• Never touch liquid that has leaked out of a battery.
• Do not mix new and old batteries, or batteries of different types, when placing them.

Turning on and off the player
Press STANDBY/ON.

Initial setup

When you turn on the player for the first time after purchase, the following message appears on the TV screen.

EXECUTE DVD PLAYER SETUP? - BASIC PICTURE/AUDIO SETTING
YES - PRESS ENTER   NO - PRESS CANCEL

Before enjoying this player, make the initial settings as follows:

1 Press ENTER.

DVD PLAYER SETUP
MENU LANGUAGE   ENGLISH
AUDIO LANGUAGE   ENGLISH
SUBTITLE   ENGLISH
ON SCREEN LANGUAGE   ENGLISH / CHINESE / SPANISH

2 Press ▲/▼ to select the on-screen language for the preference displays, etc., then press ENTER.

DVD PLAYER SETUP
MONITOR TYPE   16:9
PICTURE SOURCE   4:3 LB
SCREEN SAVER   4:3 PS
COLOUR SYSTEM   PAL
BACKGROUND

3 Press ▲/▼ to select the monitor type, then press ENTER.
• For a normal (conventional) TV, select **"4:3 LB"** or **"4:3 PS."** (See "MONITOR TYPE" in "Initial settings.")
• For a wide-screen TV, select **"16:9."**

DVD PLAYER SETUP
DIGITAL AUDIO OUTPUT   PCM ONLY
ANALOG DOWNMIX   DOLBY DIGITAL/PCM
D RANGE CONTROL   STREAM/PCM
OUTPUT LEVEL   PCM ONLY

4 Press ▲/▼ to select a desired digital output signal type, then press ENTER.
Set this item correctly according to the logo on your receiver or decoder.
(If you do not connect the player to such a device, press ENTER to finish the setting.)
• Receiver/decoder bearing Dolby Digital logo and no DTS, select **"DOLBY DIGITAL/PCM."**
• Receiver/decoder bearing both Dolby Digital and DTS logos, select **"STREAM/PCM."**
• Receiver/decoder bearing neither Dolby Digital nor DTS logo, or digital recorder, select **"PCM ONLY."**

To bring up the DVD PLAYER SETUP display later
Press SET UP for a few seconds until the DVD PLAYER SETUP display appears.

Basic Operations

Turning on and off the player

Insert a disc

1 Press ⏏ to open the disc tray.
2 Place a disc in the disc tray.
• To insert an 8-cm disc, place it in the inner recess.
3 Press ⏏ to close the disc tray.

With the label side up

Point toward the remote sensor directly as possible (the operating range is approx. 5 m.)

Main display

About On-screen guide icons
▶ : Playback.
⏸ : Pause.
◀⏸/⏸◀ : Slow-motion playback with the current speed.
▶▶/◀◀ : Fast forward/backward playback with the current speed.
▦ : At the beginning of a scene containing multi-angle views.
◯)) : At the beginning of a scene containing multi-audio sounds.
····) : At the beginning of a scene containing multi-subtitles.

You can change the setting so that the on-screen guide icons do not appear on the TV screen. (See "ON SCREEN GUIDE" in "Initial settings.")

• Each indicator lights up when corresponding function/mode is activated, or corresponding information is on the main display.

Turning on and off the player

Open/close the disc tray

Basic playback

Buttons	To do
▶*	Start/resume normal Playback
■	Stop • When RESUME is ON or DISC RESUME, this player memorizes the position on the disc where you interrupted playback. – To resume playback, press ▶. – To stop playback completely, press ■ again.
⏸*	Pause • Each time you press ⏸ on the remote control, the still picture advances to the next frame.
▶▶/◀◀ (While paused) Slow-motion playback	Fast forward/backward • Each time you press the button, the playback speed changes.
▶▶/◀◀	Skip chapter/track • If you press and hold the button during playback, playback is advanced/reversed at 5 times normal speed.
VARIABLE PLAYBACK /VARI-PLAY	(For DVD Video) The disc is played back at about 1.2 or 1.5 times (FAST)/0.8 or 0.6 times (SLOW) normal speed. The sound is not muted, and the subtitle does not go off (except for DTS). (For SVCD/VCD) The disc is played back at about 2 times (FAST)/0.5 times (SLOW) normal speed.
↺	(Only for DVD Video) The playback position moves back 10 seconds before the current position (only within the same title).

* ▶⏸ on the player starts/pauses playback.

Changing the display brightness
Press **DIMMER** to change the brightness of the display window.

Changing the display window contents
Each time you press **DISPLAY**, the display window contents changes.

Locating the beginning of a scene or song
You can select a title/chapter/track directly and start playback.
For DVD Video:
(While stopped) select title.
(While playing back) select chapter.
For SVCD/VCD/CD:
Select track.
To select 5: press 5.
To select 23: press 2, then 3.
To select 40: press 4, then 0.
• If you press TITLE/GROUP before entering the number, you can select the title instead of the chapter.

Using the disc menu
You can operate a disc—SVCD/VCD with Playback Control* (PBC)—using the disc menu shown on the TV screen.
* A method of controlling disc play for SVCD/VCD by using the disc menu.

For DVD
1 Press TOP MENU or MENU to show the disc menu.
2 Press ▲/▼/◀/▶ to select a desired item, then press ENTER or ▶ (SELECT).
• With some discs, you can also select items by entering the number using the numeric buttons.

For SVCD/VCD
1 While stopped, press TOP MENU or ▶ (SELECT) to show the menu.
2 Press the numeric buttons to select a desired item.
To select 5: press 5.
To select 23: press 2, then 3.
To select 40: press 4, then 0.
• To move to the next or previous page of the current menu, press ▶▶ or ◀◀.
• To return to the previous menu, press RETURN.

To play back without PBC
While stopped, press the numeric buttons instead of ▶ (SELECT) to start playback.

To reactivate PBC
• Press TOP MENU or MENU.
• Press ■ to stop playback, then ▶ (SELECT).

Advanced Operations

Changing the language, sound and scene angle
1 Press the button.
2 Press the button repeatedly or ▲/▼ to select the desired item.
3 Press ENTER to finish the setting.

Buttons	To do
AUDIO	For DVD Video: select audio languages. For SVCD/VCD: select the audio channel.
SUBTITLE	select the subtitle.
ANGLE	select the view-angle.

Changing the Sound Field
Each time you press **SOUND EFFECT**, the Sound Effect mode changes.
• As the value becomes bigger, the Sound Effect works stronger.

NORMAL	For watching TV in a general room.
CINEMA	For watching a movie software in a room with suppressed light.
USER1 USER2	You can adjust parameters that affect the picture character and store the settings as a user preset. See below.

Zooming the picture
Each time you press **ZOOM**, the magnification changes.
• You can use ▲/▼/◀/▶ button to move the zoomed position.
To return to the normal playback, select the normal size by pressing **ZOOM** repeatedly.

Changing the picture tone (VFP)
The VFP (Video Fine Processor) function allows you to adjust the picture-character according to the type of programming, picture tone or personal preferences.
1 Press VFP-I/P.
2 Press ◀/▶ to select the desired preset.

USER 1
GAMMA   MID
BRIGHTNESS
CONTRAST   +10
SATURATION   +10
TINT   +10
SHARPNESS   LOW
Y DELAY   2

Selected Preset
Parameter

To adjust the picture tone
1 Select "USER1" or "USER2."
2 Press ▲/▼ to select a parameter, then press ENTER.

GAMMA	Adjust this if the neutral color is bright or dark. The brightness of dark and bright portion is maintained (LOW/MID/HIGH).
BRIGHTNESS	Adjust this if the picture is bright or dark on the whole (–16 (darkest) to +16 (brightest)).
CONTRAST	Adjust this if the far and near position is unnatural (–12 to +12).
SATURATION	Adjust this if the picture is whitish or blackish (–16 (blackest) to +16 (whitest)).
TINT	Adjust this if the appearance of flesh tone is unnatural (–16 to +16).
SHARPNESS	Adjust this if the picture is indistinct (LOW/HIGH).
Y DELAY	Adjust this if the picture looks separately/overlapped (–2 to +2).

3 Press ▲/▼ to adjust the parameter, then press ENTER.
4 Repeat step 2 and 3 to adjust other parameters.
5 Press VFP-I/P to finish the setting.

Menu bar functions

You can use various functions from the menu bar.

To bring up the menu bar

When a disc is inserted, press ON SCREEN twice.
A menu bar for the type of disc inserted will appear under the status bar.

Ex.: Menu bar for DVD VIDEO

`DVD-VIDEO  8.5Mbps    TITLE 33  CHAP 33  TOTAL 1:25:58`

`TIME  ⊏⊐OFF  ⊕↦  CHAP.➡  ◁␣ 1/3  ◻ 1/5  ⊞ 1/3  ▶`

To dismiss the menu bar and the status bar, press ON SCREEN.

Basic operation procedure

1 Press ◄/► to select the icon you want to work with.
2 Press ENTER.
   After pressing ENTER:
   (1) When a pull-down menu appears, press ▲/▼ to select the setting you want, then press ENTER.
   (2) When a number-entry box appears, use the numeric buttons to enter the number you want, then press ENTER.
   (3) When changing `TIME` setting, press ENTER repeatedly to select the setting you want.

NOTES
• The selected item on the menu bar is shown in green.
• The available functions differ depending on the player status. Refer to the explanation below to check when you can use a certain function.

Menu bar functions

`TIME` selects the time mode shown in the display window and the status bar.
• **TOTAL:** Elapsed time of current title (DVD) or a disc (CD/VCD/SVCD)
• **T.REM:** Remaining time of current title (DVD) or a disc (CD/VCD/SVCD)
  (Except for DVD: while stopped, disc total time)
• **TIME:** Elapsed time of current chapter (DVD) or track (CD/VCD/SVCD)
• **REM:** Remaining time of current chapter (DVD) or track (CD/VCD/SVCD)
  (while stopped, current track total time)

`🔁` selects repeat mode.
DVD: During playback
CD: In any condition
VCD/SVCD: In any condition except PBC playback
• **CHAPTER:** Current chapter repeat (DVD)
• **TITLE:** Current title repeat (DVD)
• **TRACK:** Current track repeat (CD/VCD/SVCD)
• **ALL:** All track repeat (CD/VCD/SVCD)
• **A-B:** A-B repeat (During playback). After selecting A-B, press ENTER at the beginning point of repeat, then press ENTER again at the end point.
• **OFF:** Repeat mode deactivated. Select this to quit repeat mode.

`⊕↦` specifies beginning point of a title (DVD) or a disc (CD/VCD/SVCD) by the time.
DVD: In any condition
CD: In any condition except program or random playback
VCD/SVCD: In any condition except PBC or program or random playback

`CHAP.➡` specifies a chapter to play back from (DVD only).

`⊙⊙` selects the audio language (DVD), sound track (DVD), or audio channel (VCD/SVCD) during playback.

`◻` selects the subtitle language (DVD) or subtitle (SVCD) during playback.

`🎥` selects a desired scene angle in a multi-angle part (DVD only).

`PROG.` specifies the playback order of tracks while stopped (unavailable for DVD). You can program up to 99 tracks.

1. After selecting `PROG` icon, press the numeric buttons to specify tracks in the desired order.
   • To correct the program, press ▲/▼ to move ⇆ to the track to be corrected, then press CANCEL. The track is erased and the subsequent programmed tracks move up.
     Pressing ■ clears all the programmed tracks.
2. Press ►(SELECT) to start program playback.
   • During program playback, you cannot edit the program contents.
   • To exit the program mode, press ON SCREEN after clearing the program.

`RND.` activates random playback while stopped (unavailable for DVD).

After selecting `RND.` icon, press ENTER.

The player starts random playback.

Audio/Video files playback

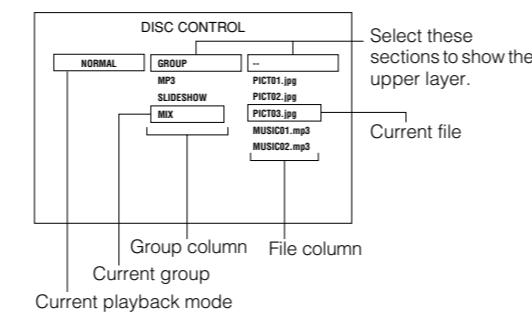You can play back MP3/JPEG files on a CD/CD-R/RW.

Precautions

• Use "ISO 9660" as the disc format.
• The player does not support "packet writing (UDF files)" discs.
• The player supports discs recorded with up to five multiple sessions.
• The player may be unable to play back a disc due to the characteristics or recording conditions.
• The player recognizes up to the fifth layer of groups, 999 files per group (including unplayable files), and up to 250 groups per disc.
• Add the appropriate extension (".mp3" and ".jpg") to the file name.
• Mp3i and MP3 Pro are not available.
• The player cannot play back a picture of more than 5120 x 3413 pixels (baseline JPEG) or 2048 x 1536 pixels (progressive JPEG).

Selecting a specific file or group

You can select files or folders (groups) using the Control display on the TV screen.

Control display

```
            DISC CONTROL
                                    Select these
  NORMAL   GROUP                    sections to show
            MP3    ┌─PICT01.jpg      the upper layer.
            SLIDESHOW│ PICT02.jpg
            MIX      │ PICT03.jpg
                     │ MUSIC01.mp3 ──── Current file
                     └ MUSIC02.mp3
```

Group column   File column
Current group
Current playback time

Press ▲/▼/◄/► to move the cursor bar to a desired file, then press ►(SELECT).
• When you press ENTER, only the selected file is played back (except for MP3 files).

Various playback mode

• To play back a disc continuously, select NORMAL.

Repeat playback

1. While stopped, press ▲/▼/◄/► to move the cursor bar to playback mode.
2. Press ENTER repeatedly to select the desired repeat mode.
   • **REPEAT 1:** Repeats the current file.
   • **REPEAT GROUP:** Repeats all files in the current group.
   • **REPEAT ALL:** Repeats all files on the disc.

Random playback

1. While stopped, press ▲/▼/◄/► to move the cursor bar to playback mode.
2. Press ENTER repeatedly to select RANDOM.
3. Press ► to move the cursor bar to the file column, then press ►(SELECT).

Program playback

1. While stopped, press ▲/▼/◄/► to move the cursor bar to playback mode.
2. Press ENTER repeatedly to select PROGRAM.
3. Press ▲/▼/◄/► to select the desired file, then press ENTER.
4. Repeat step 3 until all the desired files are selected.
   • To erase the last programmed file, press ◄ to move the cursor bar to the programmed files column, then press CANCEL.
5. Press ►(SELECT).

Various JPEG files playback

To zoom in a picture

Press ZOOM.
Each time you press ZOOM, you can magnify a JPEG file (x1.5/x2).

NOTE
This function is not available for some JPEG files depending on their resolution size and JPEG format.

To rotate/reflect a still picture

While a still picture is played back:
• Pressing ► rotates the picture by 90°.
• Pressing ▲ reflects the picture vertically.
• Pressing ▼ reflects the picture horizontally.

To select a JPEG files from the thumbnail list

1. Press and hold THUMBNAIL/LIST while a JPEG file is selected on the Control display.
2. Press ▲/▼/◄/► to select the desired picture, then press ENTER.
   • You can change the page of thumbnail list by pressing ◄◄/►►.

Slide show playback of JPEG files

Press ►(SELECT) while a JPEG file is selected on the Control display.
• To select slide show effect
  Press and hold ANGLE-SLIDE EFFECT until [SLIDE EFFECT MODE:] and the current mode appears on the TV screen.
  By pressing and holding the button repeatedly, you can select the effect from 11 effects, random effect selection (RAND), and no effect (NONE).
  The effect is not applied to progressive JPEG files.

Troubleshooting

Power

Power does not come on.
➡ Power plug is not inserted securely. Plug in securely.

Operation

"REGION CODE ERROR!" is shown on the TV.
➡ Region code of the inserted disc does not match the player. Check the region code of the disc printed on the disc jacket.

Operation is not possible.
➡ Microcomputer malfunction due to lightning or static electricity. Turn off the power and unplug the power cord, then connect the power cord again.
➡ Moisture condensation caused by a sudden change of temperature or humidity. Turn off the power, then wait for it in a few hours later.
➡ The disc does not allow the operation, or an unplayable disc is inserted. Check and replace the disc.

[LOCK] is displayed on the display window and the disc tray does not open.
➡ When you press ⏏ while pressing down ■ on the player in standby mode, the tray lock function is activated. The disc tray cannot be opened or closed in this status. To release this status, press ⏏ while pressing down ■ on the player in standby mode.

Picture

Picture is noisy.
➡ The player is connected to a VCR directly and the copyguard function is activated. Connect the player so that the picture signal flows directly to the TV. With some discs, the picture may be blurred when [PICTURE SOURCE] is set to [FILM] or [AUTO]. Set [PICTURE SOURCE] to [VIDEO (NORMAL)] or [VIDEO (ACTIVE)].

Picture is distorted when using component (Y, Pʙ, Pʀ) or S-VIDEO jack(s).
➡ Both the component connection and S-video connection are made. Disconnect the unused one.

No picture is displayed on the TV screen or the screen is blurred or divided into two parts.
➡ The player is in the progressive scanning mode though it is connected to a TV via the VIDEO or S-VIDEO jack. Observe the display window. If [P] is turned on, the player is in the progressive scanning mode.
  Make the Progressive scanning mode inactive by using the VFP - I/P button.

Audio

DVD VIDEO disc playback sound level is lower than TV broadcast sound level.
➡ Set the [D.RANGE CONTROL] preference to [TV MODE].

Analog audio output is distorted.
➡ Set the [OUTPUT LEVEL] preference to [LOW].

MP3/JPEG

No sound and/or no picture comes out.
➡ MP3/JPEG disc is recorded with the "packet writing (UDF file)." It cannot be played. Check the files you want to play back.

Files (tracks) are not played in the recorded order.
➡ This player plays the files in the alphabetic order. So, the playback order can vary.

Initial settings

You can change the settings of this player according to your preferences and playing environment.

How to set the Initial settings

1 Press SET UP.
2 Press ◄/► to select the menu.
3 Press ▲/▼ to move to select the item.
4 Press ENTER.
5 Press ▲/▼ to select the options, then press ENTER.

To dismiss a preference display
Press SET UP.

NOTES
• Some items in the menus cannot be changed during playback.
• During MP3 files playback, you cannot show the menus.
• If the upper and lower parts of the menu are cut off, adjust the picture size control of the TV.
• For settings of the LANGUAGE menu or the PARENTAL LOCK menu, see also "Language codes" below.
• Depending on the disc, the settings may not apply correctly.

LANGUAGE menu

Item	Contents
MENU LANGUAGE	You can select the default menu language of DVD VIDEO.
AUDIO LANGUAGE	You can select the default audio language of DVD VIDEO.
SUBTITLE	You can select the default subtitle language of DVD VIDEO.
ON SCREEN LANGUAGE	You can select "ENGLISH," "CHINESE," or "SPANISH" as the on-screen language.

PICTURE menu

Item	Contents
MONITOR TYPE `16:9` `4:3 LB` `4:3 PS`	You can select the monitor type to match your TV when you play back DVD VIDEO discs recorded on wide-screen televisions. **[16:9] (Wide television screen):** For a wide-screen (16:9) TV. **[4:3 LB] (Letter Box conversion):** For a normal (4:3) TV. Displays a wide-screen picture to fit the width of the TV screen keeping the aspect ratio. **[4:3 PS] (Pan Scan conversion):** For a normal (4:3) TV. The picture is zoomed up to filling the screen vertically and the left and right sides of the picture are cut off.
PICTURE SOURCE	You can obtain optimal picture quality by selecting the source type of the disc contents. **[AUTO]:** Normally, select this option. The player recognizes the picture type (film or video source) of the current disc according to the disc information. **[FILM]:** For a film source disc. **[VIDEO(NORMAL)]:** For a video source disc with relatively a few movements. **[VIDEO(ACTIVE)]:** For a video source disc with relatively a lot of movements.
SCREEN SAVER	You can set the screen saver function to ON or OFF.
COLOUR SYSTEM	You need to select the color system format according to your TV. **[PAL]:** A TV supporting PAL system. **[NTSC]:** A TV supporting NTSC system. **[MULTI]:** A TV supporting both PAL and NTSC systems. The player outputs a PAL or NTSC video signal according to the disc.
BACKGROUND	You can use your favorite image as the opening display. **[STANDARD]:** Display the JVC original image. **[USER]:** Display your favorite image as the opening display when a JPEG image is registered. **[SAVE AS BACKGROUND]:** To register a new image, select this while a JPEG image is displayed on the TV.

AUDIO menu

Item	Contents
DIGITAL AUDIO OUTPUT	Set this item correctly according to the logo on your receiver or decoder. **[PCM ONLY]:** Receiver/decoder bearing neither Dolby Digital nor DTS logo, or digital recorder. **[DOLBY DIGITAL/PCM]:** Receiver/decoder bearing Dolby Digital logo and no DTS. **[STREAM/PCM]:** Receiver/decoder bearing both Dolby Digital and DTS logos.
ANALOG DOWNMIX	Set this item properly according to your analog audio connection to play the sound of the surround multichannel audio on a DVD VIDEO. **[DOLBY SURROUND]:** Select this when connecting to a surround decoder. **[STEREO]:** Select this when connecting to a stereo amplifier or TV, or in case you want to record from a DVD VIDEO to a MiniDisc, cassette, etc.
D.RANGE CONTROL	Set this item to listen to DVD VIDEO recorded in Dolby Digital format at low or middle volume. **[WIDE RANGE]:** You can enjoy powerful playback sound. **[NORMAL]:** Normally, select this. **[TV MODE]:** Select this if the sound level of DVD VIDEO is lower than the one of TV program to make the sound at a lower volume clear.
OUTPUT LEVEL	Set this item to attenuate the level of the signal output from the analog AUDIO OUT terminals. If the sound from the speaker is distorted, select [LOW].

OTHERS menu

Item	Contents
RESUME	You can select the resume playback mode. **[ON]:** The player resumes playback from the position where playback has been stopped if the disc is still in the disc tray. **[OFF]:** This function is deactivated. **[DISC RESUME]:** The player remembers playback of the last 10 discs played. The player retains a memory of the stopped position of each disc even if the disc is removed from the disc tray.
ON SCREEN GUIDE	Activate or deactivate the on-screen guide.
AUTO STANDBY	Set the time until the player turns off (into standby) automatically if playback is stopped for more than 30 minutes or 60 minutes.
AV COMPULINK MODE	Set this item correctly when using the AV COMPU LINK system. See "Using the AV COMPU LINK system" in "Connections."

PARENTAL LOCK

```
PARENTAL LOCK
┌─────────────────┐
│ COUNTRY CODE  INIT │
│ SET LEVEL    NONE │
│ PASSWORD         │
│ EXIT             │
└─────────────────┘
```

Select this item, then press ENTER to show the PARENTAL LOCK menu for limiting playback by children. Scenes which are limited by this function are not played or replaced with other scenes.
[COUNTRY CODE]: Select the code of your country/area.
[SET LEVEL]: Select the level of restriction. ("1" is the strictest.)
[PASSWORD]: Enter your 4-digit password by pressing the numeric buttons (0 to 9).
[EXIT]: Select this and press ENTER to go back to the OTHERS menu.

Notes:
• Some DVD VIDEO cannot be played by this function. If you try to play such a disc, the PARENTAL LOCK menu appears on the TV and asks whether you want to release the lock or not.
  To release the lock and play, select "TEMPORARY RELEASE," press ENTER, then enter your password. Otherwise, eject the disc.
• To change the setting of the limitation, you need to enter your password.
• If you forget your password, enter "8888."

Country/Area code list for Parental Lock

AD	Andorra	CI	Côte d'Ivoire	GQ	Equatorial Guinea	LA	Lao People's Democratic Republic	OM	Oman
AE	United Arab Emirates	CK	Cook Islands	GR	Greece	LB	Lebanon	PA	Panama
AF	Afghanistan	CL	Chile	GS	South Georgia and the South Sandwich	LC	Saint Lucia	PE	Peru
AG	Antigua and Barbuda	CM	Cameroon	GT	Guatemala	LI	Liechtenstein	PF	French Polynesia
AI	Anguilla	CN	China	GU	Guam	LK	Sri Lanka	PG	Papua New Guinea
AL	Albania	CO	Colombia	GW	Guinea-Bissau	LR	Liberia	PH	Philippines
AM	Armenia	CR	Costa Rica	GY	Guyana	LS	Lesotho	PK	Pakistan
AN	Netherlands Antilles	CU	Cuba	HK	Hong Kong	LT	Lithuania	PL	Poland
AO	Angola	CV	Cape Verde	HM	Heard Island and McDonald Islands	LU	Luxembourg	PM	Saint Pierre and Miquelon
AQ	Antarctica	CX	Christmas Island			LV	Latvia	PN	Pitcairn
AR	Argentina	CY	Cyprus	HN	Honduras	LY	Libyan Arab Jamahiriya	PR	Puerto Rico
AS	American Samoa	CZ	Czech Republic	HR	Croatia	MA	Morocco	PT	Portugal
AT	Austria	DE	Germany	HT	Haiti	MC	Monaco	PW	Palau
AU	Australia	DJ	Djibouti	HU	Hungary	MD	Moldova, Republic of	PY	Paraguay
AW	Aruba	DK	Denmark	ID	Indonesia	MG	Madagascar	QA	Qatar
AZ	Azerbaijan	DM	Dominica	IE	Ireland	MH	Marshall Islands	RE	Réunion
BA	Bosnia and Herzegovina	DO	Dominican Republic	IL	Israel	MK	Macedonia	RO	Romania
BB	Barbados	DZ	Algeria	IN	India	ML	Mali	RU	Russian Federation
BD	Bangladesh	EC	Ecuador	IO	British Indian Ocean Territory	MM	Myanmar	RW	Rwanda
BE	Belgium	EE	Estonia	IQ	Iraq	MN	Mongolia	SA	Saudi Arabia
BF	Burkina Faso	EG	Egypt	IR	Iran (Islamic Republic of)	MO	Macau	SB	Solomon Islands
BG	Bulgaria	EH	Western Sahara	IS	Iceland	MP	Northern Mariana Islands	SC	Seychelles
BH	Bahrain	ER	Eritrea	IT	Italy	MQ	Martinique	SD	Sudan
BI	Burundi	ES	Spain	JM	Jamaica	MR	Mauritania	SE	Sweden
BJ	Benin	ET	Ethiopia	JO	Jordan	MS	Montserrat	SG	Singapore
BM	Bermuda	FI	Finland	JP	Japan	MT	Malta	SH	Saint Helena
BN	Brunei Darussalam	FJ	Fiji	KE	Kenya	MU	Mauritius	SI	Slovenia
BO	Bolivia	FK	Falkland Islands	KG	Kyrgyzstan	MV	Maldives	SJ	Svalbard and Jan Mayen
BR	Brazil	FM	Micronesia (Federated States of)	KH	Cambodia	MW	Malawi	SK	Slovakia
BS	Bahamas	FO	Faroe Islands	KI	Kiribati	MX	Mexico	SL	Sierra Leone
BT	Bhutan	FR	France	KM	Comoros	MY	Malaysia	SM	San Marino
BV	Bouvet Island	FX	France, Metropolitan	KN	Saint Kitts and Nevis	MZ	Mozambique	SN	Senegal
BW	Botswana	GA	Gabon	KP	Korea, Democratic People's Republic of	NA	Namibia	SO	Somalia
BY	Belarus	GB	United Kingdom			NC	New Caledonia	SR	Suriname
BZ	Belize	GD	Grenada	KR	Korea, Republic of	NE	Niger	ST	Sao Tome and Principe
CA	Canada	GE	Georgia	KW	Kuwait	NF	Norfolk Island	SV	El Salvador
CC	Cocos (Keeling) Islands	GF	French Guiana	KY	Cayman Islands	NG	Nigeria	SY	Syrian Arab Republic
CF	Central African Republic	GH	Ghana	KZ	Kazakhstan	NI	Nicaragua	SZ	Swaziland
CG	Congo	GI	Gibraltar			NL	Netherlands	TC	Turks and Caicos Islands
CH	Switzerland	GL	Greenland			NO	Norway	TD	Chad
		GM	Gambia			NP	Nepal	
		GN	Guinea			NR	Nauru	
		GP	Guadeloupe			NU	Niue	
						NZ	New Zealand	

Language codes list for the LANGUAGE menu

AA	Afar	CA	Catalan	GL	Galician	KK	Kazakh	ML	Malayalam	PS	Pashto, Pushto	SL	Slovenian	TL	Tagalog
AB	Abkhazian	CO	Corsican	GN	Guarani	KL	Greenlandic	MN	Mongolian	PT	Portuguese	SM	Samoan	TN	Setswana
AF	Afrikaans	CS	Czech	GU	Gujarati	KM	Cambodian	MO	Moldavian	QU	Quechua	SN	Shona	TO	Tongan
AM	Ameharic	CY	Welsh	HA	Hausa	KN	Kannada	MR	Marathi	RM	Rhaeto-Romance	SO	Somali	TR	Turkish
AR	Arabic	DA	Danish	HI	Hindi	KO	Korean (KOR)	MS	Malay (MAY)	RN	Kirundi	SQ	Albanian	TS	Tsonga
AS	Assamese	DZ	Bhutani	HR	Croatian	KS	Kashmiri	MT	Maltese	RO	Rumanian	SR	Serbian	TT	Tatar
AY	Aymara	EL	Greek	HU	Hungarian	KU	Kurdish	MY	Burmese	RU	Russian	SS	Siswati	TW	Twi
AZ	Azerbaijani	EN	English	HY	Armenian	KY	Kirghiz	NA	Nauru	RW	Kinyarwanda	ST	Sesotho	UK	Ukrainian
BA	Bashkir	EO	Esperanto	IA	Interlingua	LA	Latin	NE	Nepali	SA	Sanskrit	SU	Sundanese	UR	Urdu
BE	Byelorussian	ES	Spanish	IE	Interlingue	LN	Lingala	NL	Dutch	SD	Sindhi	SV	Swedish	UZ	Uzbek
BG	Bulgarian	ET	Estonian	IK	Inupiak	LO	Laothian	NO	Norwegian	SG	Sangho	SW	Swahili	VI	Vietnamese
BH	Bihari	EU	Basque	IN	Indonesian	LT	Lithuanian	OC	Occitan	SH	Serbo-Croatian	TA	Tamil	VO	Volapuk
BI	Bislama	FA	Persian	IS	Icelandic	LV	Latvian, Lettish	OM	(Afan) Oromo	SI	Singhalese	TE	Telugu	WO	Wolof
BN	Bengali, Bangla	FI	Finnish	IW	Hebrew	MG	Malagasy	OR	Oriya	SK	Slovak	TG	Tajik	XH	Xhosa
BO	Tibetan	FJ	Fiji	JA	Japanese	MI	Maori	PA	Panjabi	SL	Slovenian	TH	Thai	YO	Yoruba
BR	Breton	FO	Faroese	JI	Yiddish	MK	Macedonian	PL	Polish			TI	Tigrinya	ZH	Zhuang
		FR	French	JW	Javanese							TK	Turkmen	ZU	Zulu
		FY	Frisian	KA	Georgian									
		GA	Irish											
		GD	Scots Gaelic											

Specifications

Specifications and appearance are subject to change without prior notice.

General

Readable discs:
DVD VIDEO, DVD-R (Video format), DVD-RW (Video format), SVCD, Video CD, Audio CD (CD-DA), CD-R/RW (CD-DA, SVCD, Video CD, MP3 format, JPEG)

Video format:
NTSC: 525i/525p
PAL: 625i/625p

Other

Power requirements:
AC 110 V - 240 V ⏦, 50 Hz/60 Hz
(Only for the Australia model: AC 220 V - 240 V ⏦, 50 Hz)

Power consumption:
11.0 W (POWER ON), 1.0 W (STANDBY mode)

Mass: 1.5 kg

Dimensions (W x H x D):
435 mm x 44 mm x 201.5 mm

Video outputs

Component (pin jacks)
Y Output: 1.0 Vp-p (75 Ω)
Pʙ/Pʀ Output: 0.7 Vp-p (75 Ω)

VIDEO (pin jack): 1.0 Vp-p (75 Ω)

S-VIDEO (S jack)
Y Output: 1.0 Vp-p (75 Ω)
C Output: 286 mVp-p (75 Ω)

Horizontal resolution: 500 lines or more

Audio outputs

ANALOG OUT (pin jack): 2.0 Vrms (10 kΩ)
DIGITAL OUT (COAXIAL): 0.5 Vp-p (75 Ω termination)

Audio characteristics

Frequency response
CD (sampling frequency 44.1 kHz): 2 Hz to 20 kHz
DVD (sampling frequency 48 kHz):
  2 Hz to 22 kHz(4 Hz to 20 kHz for DTS and Dolby Digital bitstream signals)
DVD (sampling frequency 96 kHz): 2 Hz to 44 kHz
Wow and flutter: Unmeasurable (less than ± 0.002%)
Total harmonic distortion: less than 0.009%

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• This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.
• *CONSUMERS SHOULD NOTE THAT NOT ALL HIGH DEFINITION TELEVISION SETS ARE FULLY COMPATIBLE WITH THIS PRODUCT AND MAY CAUSE ARTIFACTS TO BE DISPLAYED IN THE PICTURE. IN CASE OF 525 OR 625 PROGRESSIVE SCAN PICTURE PROBLEMS, IT IS RECOMMENDED THAT THE USER SWITCH THE CONNECTION TO THE 'STANDARD DEFINITION' OUTPUT. IF THERE ARE QUESTIONS REGARDING OUR TV SET COMPATIBILITY WITH THIS MODEL 525p AND 625p DVD PLAYER, PLEASE CONTACT OUR CUSTOMER SERVICE CENTER."